

Claims

What is claimed is:

1. A system for pumping a fluid from a well, comprising:
 - a submersible pump;
 - a power conduit disposed in the fluid and operatively connected to the submersible pump, wherein the power conduit has a density similar to the density of the fluid within the well; and
 - a sealing device operatively connected to the submersible pump, wherein the sealing device supports a pressure differential created by the submersible pump.
2. The system of claim 1, wherein the power conduit comprises a hollow section.
3. The system of claim 2, wherein the submersible pump is operated by pressure conveyed through the hollow section.
4. The system of claim 1, wherein the power conduit comprises at least one conductor and an insulating material.
5. The system of claim 4, wherein the submersible pump is operated by electrical power conveyed through the conductor.
6. The system of claim 1, wherein the sealing device is disposed in a well casing.
7. The system of claim 1, wherein the submersible pump is disposed in a liner.
8. The system of claim 7, wherein the sealing device is disposed in the liner.
9. The system of claim 1, wherein the sealing device comprises a packer.
10. The system of claim 9, wherein the packer has a release mechanism operated by tension in the power conduit.

11. The system of claim 9, wherein the packer equalizes the pressure above and below the packer when the submersible pump is deactivated.
12. The system of claim 9, wherein the packer is disposed above the submersible pump.
13. The system of claim 9, wherein the packer is disposed below the submersible pump.
14. The system of claim 1, wherein the sealing device comprises a shoe.
15. The system of claim 14, wherein the shoe is disposed in a well casing.
16. The system of claim 14, wherein the shoe is disposed in a liner.
17. The system of claim 1, wherein the submersible pump comprises a buoyant material to decrease the weight of the submersible pump when submerged in the well.
18. The system of claim 1, further comprising a backflow preventer disposed below the submersible pump.
19. A system for pumping fluids from a well, comprising:
 - an electric submersible pump;
 - a power conduit operatively connected to the electric submersible pump, wherein the power conduit has a density near the density of a fluid within the well; and
 - a sealing device operatively connected to the electric submersible pump, wherein the sealing device supports a pressure differential created by the electric submersible pump.
20. The system of claim 19, wherein the power conduit comprises a conductor and an insulating material.
21. The system of claim 20, wherein the submersible pump is operated by electrical power conveyed through the conductor.
22. A system for pumping fluids from a well, comprising:
 - a hydraulically driven submersible pump;

a power conduit operatively connected to the hydraulically driven submersible pump,
wherein the power conduit has a density near the density of a fluid within the
well; and

a sealing device operatively connected to the hydraulically driven submersible pump,
wherein the sealing device supports a pressure differential created by the
submersible pump.

23. The system of claim 22, wherein the power conduit comprises a hollow section.

24. The system of claim 23, wherein the submersible pump is operated by pressure conveyed
through the hollow section.

25. A method for deploying a submersible pump in a well, the method comprising:

operatively connecting a power conduit to the submersible pump, wherein the power
conduit has a density near the density of a fluid in the well;

lowering the submersible pump into the well, wherein the submersible pump is supported
by the power conduit and the well is substantially full of the fluid;

sealing between a submersible pump outlet and a submersible pump inlet; and
conveying power to the submersible pump through the power conduit.

26. The method of claim 25, wherein the power conveyed through the power conduit is
electrical.

27. The method of claim 25, wherein the power conveyed through the power conduit is
hydraulic.